

भारतीय मानक  
Indian Standard

IS 13572 (Part 2) : 2018  
ISO 9928-2 : 2014

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## क्रेन — क्रेन प्रचालन मैनुअल

भाग 2 मोबाइल क्रेन

## Cranes — Crane Operating Manual

Part 2 Mobile Cranes

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भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

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## NATIONAL FOREWORD

This Indian Standard (Part 2) which is identical with ISO 9928-2 : 2014 ‘Cranes — Crane operating manual — Part 2: Mobile cranes’ issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of the Cranes, Lifting Chains and its Related Equipment Sectional Committee and approval of the Mechanical Engineering Division Council.

This standard is published in two parts. Other part in this series is:

### Part 1 General

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 4306-1 : 2007 Cranes — Vocabulary — Part 1: General	IS 13473 (Part 1) : 2015 Cranes — Vocabulary: Part 1 General	Identical
ISO 4306-2 Cranes — Vocabulary — Part 2: Mobile cranes	IS/ISO 4306-2 : 2012 Cranes — Vocabulary: Part 2 Mobile cranes ( <i>second revision</i> )	Identical with ISO 4306-2 : 2012
ISO 9928-1 : 2014 Cranes — Crane operating manual — Part 1: General	IS 13572 (Part 1) : 1992 Cranes — Crane driving manual: Part 1 General	Identical with ISO 9928-1 : 1990

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 ‘Rules for rounding off numerical values (*revised*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard*  
**CRANES — CRANE OPERATING MANUAL**  
**PART 2 MOBILE CRANES**

## **1 Scope**

This part of ISO 9928 specifies the contents of a manual for the operators of mobile cranes as defined in ISO 4306-2.

## **2 Normative references**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4306-1:2007, *Cranes — Vocabulary — Part 1: General*

ISO 4306-2, *Cranes — Vocabulary — Part 2: Mobile cranes*

ISO 9928-1:2014, *Cranes — Crane operating manual — Part 1: General*

## **3 Terms and definitions**

For the purposes of this document, the terms and definitions given in ISO 4306-1 and the following apply.

### **3.1**

#### **crane operator**

person who uses (operates) the crane controls

[SOURCE: ISO 4306-1:2007, 7.1]

Note 1 to entry: For mobile cranes, the term *driver* is generally used to refer to that person who operates only those controls which move the crane from place to place.

## **4 Presentation of the manual**

ISO 9928-1:2014, Clause 4, shall apply, with the exception of 4.2 e).

## **5 Contents**

### **5.1 Technical data**

This section of the manual shall include technical data for the crane operator which are necessary for operating, maintaining, inspecting and servicing the crane. The following are examples of this technical data:

- a) general dimensions;
- b) schematic diagrams;
- c) lubrication and fluids;

- d) machine and component weights;
- e) wire rope specifications;
- f) performance specifications;
- g) rated capacities (may be supplied in a separate book).

## **5.2 General safety instructions**

This section of the manual shall include general safety rules applicable to both crane and job site practices.

It shall address aspects including

- a) electrical hazards (working in the vicinity of overhead power lines, etc.),
- b) load handling,
- c) setting up crane,
- d) access, egress,
- e) warning and crane-related hand signals, and
- f) environmental conditions such as wind or temperature limitations.

## **5.3 Controls, control or work stations**

### **5.3.1 Crane travelling on road**

This section of the manual shall illustrate all controls, pedals, gauges, warning lights, symbols, etc. of operation and explain their function. All gauges, indicators and lights shall have an explanation of their function.

### **5.3.2 Positioning loads**

This section of the manual shall illustrate all controls, levers, pedals, switches, gauges, warning lights, symbols, etc. All controls shall have an explanation of their operation. All gauges, indicators and lights shall have an explanation and/or instruction by means of graphical symbols.

## **5.4 Crane information**

This section of the manual shall include information on the following:

- a) boom and attachments: instructions for their installation, assembly and disassembly and limitations of use;
- b) hoist line reeving: instructions on how to select and reeve the correct parts of line for lift;
- c) instructions on the assembly, disassembly and storage of the crane;
- d) inspections: instructions on the inspection responsibilities of the crane operator, including information on wire rope discard criteria, correct fluid levels, etc.;
- e) maintenance instructions and the responsibilities of the crane operator;
- f) load charts and their use;
- g) special operations.

## 5.5 Operation

This section of the manual shall contain explanations on how to carry out the following:

- a) pre-start inspection, which the operator is expected to carry out prior to starting the machine;
- b) start up: information relative to starting the engine, cold weather starting, jump-starting, etc.;
- c) travelling: information on moving the crane on the road or job site, provide information on the use of the transmission and brakes, inclines, the position of the upper structure, boom elevation, etc.;
- d) set-up: information on setting up the crane, on outriggers, ground conditions, operational aids, safety devices, etc.;
- e) load positioning: information on positioning loads at the job site, which shall include the lifting of loads on outriggers and/or tyres, and the applicable positioning of the upper structure, among others;
- f) loading/unloading: instructions on the correct procedures for loading, unloading and transporting the crane on other vehicles.

## 5.6 Leaving the crane out of service

This section of the manual shall contain the following:

- a) instruction on the correct parking of the crane;
- b) information on the allowable wind speed.

## Bibliography

- [1] ISO 80000-1, *Quantities and units — Part 1: General*



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### Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

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#### Amendments Issued Since Publication

Amendment No.	Date of Issue	Text Affected

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